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EXAMINER

NAHAR, QAMRUN

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,524

Applicant(s)

CHARISIUS ET AL.

Examiner

Qamrun Nahar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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DETAILED ACTION

1. Claims 1-70 have been examined.

Information Disclosure Statement

2. The information disclosure statement (IDS) filed on 7/12/01 has been considered by the examiner.

Specification

3. The disclosure is objected to because of the following informalities: under **Cross-Reference To Related Applications** section on pages 1-2, U.S. Patent Application serial numbers of related applications are missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 5-9, 12-19, 23-24, 27-32, 36-40, 43-50, 54-55, 58-63, 66-67 and 70 are rejected under 35 U.S.C. 102(e) as being anticipated by Carpenter-Smith (U.S. 5,838,973).

Per Claim 1:

The Carpenter-Smith patent discloses:

- **a method in a data processing system** ("A novel computerized modeling system is provided. The present invention is an interactive, real-time software tool, implemented by a computer, for physically transforming an applied object-oriented programming (OOP) based system or process into a visual representation. The software tool includes a class developer for interactively developing the visual representation in real time." in column 1, lines 48-54)

- **receiving a request to generate a data model from a data definition file containing a data structure with a plurality of data elements, each data element having a name and a definition; generating a diagram for each data element, the diagrams having names corresponding to the data elements** ("FIG. 4 is a depiction of the process map window 170 of the preferred embodiment. A new file may be opened by selecting the new file box 166 of FIG. 3, or by way of the other available user-inputs ... Upon opening a new user file, the process map window 170 is presented, which guides the user through the object-oriented design process. Selection of a process icon in process map window 170 automatically takes the user to a different step in the object modeling process. The process icons in process map window 170 include the parse & clarify process icon 172, the object process icon 174, the responsibilities process icon 176, the descriptions process icon 178, the collaborations process icon 180, the diagram states process icon 182, the encapsulation process icon 184, and the static relationships process icon 186." in column 6, lines 30-45)

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- determining whether an attribute in the data structure is associated with one of the data elements; when it is determined that an attribute in the data structure is associated with one of the data elements, displaying a graphical representation of the attribute with the diagram corresponding to the one data element; determining whether the data structure includes a reference between two of the data elements; when it is determined that the data structure includes a reference between two elements, displaying a reference link from the diagram associated with a first of the two elements to the diagram associated with a second of the two elements; determining whether the data structure includes a group attribute identifying at least one of the data elements as group attribute member; when it is determined that the data structure includes a group attribute, displaying a group symbol; displaying a first link between the group symbol and the diagram that is associated with the identified at least one data element; and displaying a second link between the group symbol and the diagram of the data element having the associated group attribute ("FIG. 5 is a flow diagram of the process map window 170 of FIG. 4. Referring now to FIGS. 4 and 5, the process begins at start step 190, where the process map window 170 is presented. Step 192 includes creating a process document where the process requirements are parsed and clarified. Step 192 is initiated by selecting the parse & clarify process icon 172. Selection of the object process icon 174 advances processing to step 194, where classes of the model are identified, model objects are created. Processing continues at step 196, which is initiated by selection of the responsibilities process icon 176. Step 196 involves identifying and assigning responsibilities to the classes identified in step 194. The ability to continually enhance and modify the model is apparent at step 198, where the classes are further defined by further clarifying the

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responsibilities. This includes clarifying attributes, behaviors and collaborations for the classes. Step 198 is initiated by selecting the descriptions process icon 178 in the process map window 170. When the classes, attributes, behaviors and collaborations have been defined, processing continues at step 200 which is initiated by selecting the collaborations process icon 180. Step 200 involves the creation of interaction diagrams that allow the collaborations between the objects to be evaluated. Specific interactions between objects can be created, modified or deleted at step 200. Steps 202, 204 and 206 allow the user to view various aspects of the model that was created. Step 202 is initiated by selecting the diagram state process icon 182, which allows the user to view the dynamic aspect of a class. The user can view the role that each object plays in the model at step 204 by selecting the encapsulation process icon 184. The static relationships of the model can be viewed at step 206 by selecting the static relationships process icon 186. Processing continues at decision step 208, where it is determined whether the model is complete. If the user has completed the model, the process ends at stop step 210.” in column 6, lines 46-67 to column 7, lines 1-14).

Per Claim 5:

The Carpenter-Smith patent discloses:

- wherein the step of determining whether the data structure includes a reference between two of the data elements comprises the step of determining whether the name of the second element is within the definition of the first data element (column 18, lines 52-67 to column 19, lines 1-10).

Per Claim 6:

The Carpenter-Smith patent discloses:

- wherein the step of displaying the second link further comprises the step of determining whether the data element has the associated group attribute (column 18, lines 52-67 to column 19, lines 1-10).

Per Claim 7:

The Carpenter-Smith patent discloses:

- wherein the step of determining whether the data element has the associated group attribute comprises the step of determining whether the group attribute is within the definition of the data element (column 18, lines 52-67 to column 19, lines 1-10).

Per Claim 8:

The Carpenter-Smith patent discloses:

- further comprising the step of storing information used to generate the data model in a graphical view file (column 6, lines 30-45).

Per Claims 9, 12-14 & 16-17:

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These are another versions of the claimed method discussed above, claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above.

Thus, accordingly, these claims are also anticipated by Carpenter-Smith.

Per Claims 15 & 18:

These are another versions of the claimed method discussed above (claims 5 and 8, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Carpenter-Smith.

Per Claim 19:

The Carpenter-Smith patent discloses:

- **a method in a data processing system** (“A novel computerized modeling system is provided. The present invention is an interactive, real-time software tool, implemented by a computer, for physically transforming an applied object-oriented programming (OOP) based system or process into a visual representation. The software tool includes a class developer for interactively developing the visual representation in real time.” in column 1, lines 48-54)
- **receiving a request to generate a data definition file from a graphical representation having a plurality of data element diagrams, each data element diagram having a name; adding a data element identifier in the data definition file for each data element diagram in**

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the graphical representation; adding the name of each data element diagram to the corresponding data element identifier (“FIG. 4 is a depiction of the process map window 170 of the preferred embodiment. A new file may be opened by selecting the new file box 166 of FIG. 3, or by way of the other available user-inputs ... Upon opening a new user file, the process map window 170 is presented, which guides the user through the object-oriented design process. Selection of a process icon in process map window 170 automatically takes the user to a different step in the object modeling process. The process icons in process map window 170 include the parse & clarify process icon 172, the object process icon 174, the responsibilities process icon 176, the descriptions process icon 178, the collaborations process icon 180, the diagram states process icon 182, the encapsulation process icon 184, and the static relationships process icon 186. ... Referring now to FIG. 45, the process of creating new interactions in a pre-existing interaction diagram is shown.” in column 6, lines 30-45 and column 20, lines 23-47)

- determining whether an attribute is associated with one of the data element diagrams; when it is determined that an attribute is associated with one of the data element diagrams, adding the attribute to the data element identifier for the one data element diagram; determining whether the graphical representation has a reference link between two of the data element diagrams; when it is determined that the graphical representation has a reference link between two data element diagrams, adding a reference to the data element identifier corresponding to one of the two data element diagrams to reflect a link between the two data element diagrams; determining whether the graphical representation has a group symbol; when it is determined that the graphical representation has a group symbol,

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determining whether the group symbol is a destination in a first link with a first of the data element diagrams; when it is determined that the group symbol is a destination in a first link with a first of the data element diagrams, adding a group definition to the data definition file that includes the name of the first data element diagram; determining whether the group symbol is a source in a second link with a second of the data element diagrams; and when it is determined that the group symbol is a source in a second link with a second of the data element diagrams, adding to the data element identifier corresponding to the second element diagram a reference corresponding to the group definition (“FIG. 5 is a flow diagram of the process map window 170 of FIG. 4. Referring now to FIGS. 4 and 5, the process begins at start step 190, where the process map window 170 is presented. Step 192 includes creating a process document where the process requirements are parsed and clarified. Step 192 is initiated by selecting the parse & clarify process icon 172. Selection of the object process icon 174 advances processing to step 194, where classes of the model are identified, model objects are created. Processing continues at step 196, which is initiated by selection of the responsibilities process icon 176. Step 196 involves identifying and assigning responsibilities to the classes identified in step 194. The ability to continually enhance and modify the model is apparent at step 198, where the classes are further defined by further clarifying the responsibilities. This includes clarifying attributes, behaviors and collaborations for the classes. Step 198 is initiated by selecting the descriptions process icon 178 in the process map window 170. When the classes, attributes, behaviors and collaborations have been defined, processing continues at step 200 which is initiated by selecting the collaborations process icon 180. Step 200 involves the creation of interaction diagrams that allow the collaborations

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between the objects to be evaluated. Specific interactions between objects can be created, modified or deleted at step 200. Steps 202, 204 and 206 allow the user to view various aspects of the model that was created. Step 202 is initiated by selecting the diagram state process icon 182, which allows the user to view the dynamic aspect of a class. The user can view the role that each object plays in the model at step 204 by selecting the encapsulation process icon 184. The static relationships of the model can be viewed at step 206 by selecting the static relationships process icon 186. Processing continues at decision step 208, where it is determined whether the model is complete. If the user has completed the model, the process ends at stop step 210.” in column 6, lines 46-67 to column 7, lines 1-14).

Per Claim 23:

The Carpenter-Smith patent discloses:

- wherein the step of adding a reference to the data element identifier comprises the steps of: identifying one of two data element diagrams as a source of the reference link and the other as a destination of the reference link; and adding the name of the destination to the data element identifier corresponding to the source (column 20, lines 23-47).

Per Claims 24 & 27-31:

These are another versions of the claimed method discussed above, claim 19, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above.

Thus, accordingly, these claims are also anticipated by Carpenter-Smith.

Per Claims 32 & 36-39:

These are computer-readable medium versions of the claimed method discussed above (claims 1 & 5-8, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Carpenter-Smith.

Per Claims 40 & 43-49:

These are computer-readable medium versions of the claimed method discussed above (claims 9 & 12-18, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Carpenter-Smith.

Per Claims 50 & 54:

These are computer-readable medium versions of the claimed method discussed above (claims 19 and 23, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Carpenter-Smith.

Per Claims 55 & 58-62:

These are computer-readable medium versions of the claimed method discussed above (claims 24 and 27-31, respectively), wherein all claim limitations also have been addressed

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and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Carpenter-Smith.

Per Claim 63:

The Carpenter-Smith patent discloses:

- **a data processing system comprising: a secondary storage device comprising a first data definition file having first data elements and relationships between the first data elements; a memory device further comprising a program that receives a first request to display a first graphical representation of the first data definition file such that the first graphical representation has first data element diagrams and relationships between the first data element diagrams reflecting the first data elements and the relationships between the first data elements contained in the first data definition file, that displays the first graphical representation responsive to receiving the first request** (“A novel computerized modeling system is provided. The present invention is an interactive, real-time software tool, implemented by a computer, for physically transforming an applied object-oriented programming (OOP) based system or process into a visual representation. The software tool includes a class developer for interactively developing the visual representation in real time. ... FIG. 4 is a depiction of the process map window 170 of the preferred embodiment. A new file may be opened by selecting the new file box 166 of FIG. 3, or by way of the other available user-inputs ... Upon opening a new user file, the process map window 170 is presented, which guides the user through the object-oriented design process. Selection of a process icon in process map window 170

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automatically takes the user to a different step in the object modeling process. The process icons in process map window 170 include the parse & clarify process icon 172, the object process icon 174, the responsibilities process icon 176, the descriptions process icon 178, the collaborations process icon 180, the diagram states process icon 182, the encapsulation process icon 184, and the static relationships process icon 186. ... Referring now to FIG. 45, the process of creating new interactions in a pre-existing interaction diagram is shown.” in column 1, lines 48-54; column 6, lines 30-45; and column 20, lines 23-47)

- that displays a second graphical representation having second data element diagrams and relationships between the second data element diagrams, that receives a second request to generate a second data definition file from the second graphical representation such that the second data definition file has second data elements and relationships between the second data elements reflecting the second data element diagrams and the relationships between the second data element diagrams of the second graphical representation, and that generates the second data definition file responsive to receiving the second request; and a processor for running the program (“FIG. 5 is a flow diagram of the process map window 170 of FIG. 4. Referring now to FIGS. 4 and 5, the process begins at start step 190, where the process map window 170 is presented. Step 192 includes creating a process document where the process requirements are parsed and clarified. Step 192 is initiated by selecting the parse & clarify process icon 172. Selection of the object process icon 174 advances processing to step 194, where classes of the model are identified, model objects are created. Processing continues at step 196, which is initiated by selection of the responsibilities process icon 176. Step 196

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involves identifying and assigning responsibilities to the classes identified in step 194. The ability to continually enhance and modify the model is apparent at step 198, where the classes are further defined by further clarifying the responsibilities. This includes clarifying attributes, behaviors and collaborations for the classes. Step 198 is initiated by selecting the descriptions process icon 178 in the process map window 170. When the classes, attributes, behaviors and collaborations have been defined, processing continues at step 200 which is initiated by selecting the collaborations process icon 180. Step 200 involves the creation of interaction diagrams that allow the collaborations between the objects to be evaluated. Specific interactions between objects can be created, modified or deleted at step 200. Steps 202, 204 and 206 allow the user to view various aspects of the model that was created. Step 202 is initiated by selecting the diagram state process icon 182, which allows the user to view the dynamic aspect of a class. The user can view the role that each object plays in the model at step 204 by selecting the encapsulation process icon 184. The static relationships of the model can be viewed at step 206 by selecting the static relationships process icon 186. Processing continues at decision step 208, where it is determined whether the model is complete. If the user has completed the model, the process ends at stop step 210.” in column 6, lines 46-67 to column 7, lines 1-14).

Per Claim 66:

The Carpenter-Smith patent discloses:

- wherein the program further stores the second graphical representation in a second graphical view file on the secondary storage device (column 6, lines 30-45).

Per Claim 67:

The Carpenter-Smith patent discloses:

- wherein the program further stores the second data definition file on the secondary storage device (column 6, lines 30-45).

Per Claim 70:

This is a system version of the claimed method discussed above, claim 9, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above.

Thus, accordingly, this claim is also anticipated by Carpenter-Smith.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-4, 10-11, 20-22, 25-26, 33-35, 41-42, 51-53, 56-57, 64-65 and 68-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter-Smith (U.S. 5,838,973) in view of Mutschler (U.S. 6,381,743).

Per Claim 2:

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The rejection of claim 1 is incorporated, and further, Carpenter-Smith does not explicitly teach wherein the data model is an XML structure diagram. Mutschler teaches wherein the data model is an XML structure diagram (column 4, lines 27-35).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Carpenter-Smith to include wherein the data model is an XML structure diagram using the teaching of Mutschler. The modification would be obvious because one of ordinary skill in the art would be motivated to use an open industry standard that provide means for sharing information.

Per Claim 3:

The rejection of claim 1 is incorporated, and further, Carpenter-Smith does not explicitly teach wherein the data definition file is a Document Type Definition file. Mutschler teaches wherein the data definition file is a Document Type Definition file (column 4, lines 44-59).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Carpenter-Smith to include wherein the data definition file is a Document Type Definition file using the teaching of Mutschler. The modification would be obvious because one of ordinary skill in the art would be motivated to use an open industry standard that provide means for sharing information.

Per Claim 4:

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The rejection of claim 1 is incorporated, and further, Carpenter-Smith does not explicitly teach wherein the data definition file is an XML schema file. Mutschler teaches wherein the data definition file is an XML schema file (column 4, lines 44-59).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Carpenter-Smith to include wherein the data definition file is an XML schema file using the teaching of Mutschler. The modification would be obvious because one of ordinary skill in the art would be motivated to use an open industry standard that provide means for sharing information.

Per Claims 10-11:

These are another versions of the claimed method discussed above (claims 2-3, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 20-22:

These are another versions of the claimed method discussed above (claims 2-4, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 25 & 26:

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These are another versions of the claimed method discussed above (claims 20 and 21, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 33-35:

These are computer-readable medium versions of the claimed method discussed above (claims 2-4, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 41-42:

These are computer-readable medium versions of the claimed method discussed above (claims 10-11, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 51-53:

These are computer-readable medium versions of the claimed method discussed above (claims 20-22, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

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Per Claims 56-57:

These are computer-readable medium versions of the claimed method discussed above (claims 25-26, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claim 64:

This is a data processing system version of the claimed method discussed above, claim 3, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 65:

This is a data processing system version of the claimed method discussed above, claim 3, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claims 68-69:

This is a data processing system version of the claimed method discussed above, claim 4, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Conclusion


8. Any inquiry concerning this communication from the examiner should be directed to Qamrun Nahar whose telephone number is (703) 305-7699. The examiner can normally be reached on Mondays through Thursdays from 9:00 AM to 6:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone number for the organization where this application or processing is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QN
May 13, 2004



**TODD INGBERG
PRIMARY EXAMINER**